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AT-RISK DRINKING DRIVERS IN THE 1984 EDMONTON AREA STUDY SAMPLE

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1985

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SUMMARY

This report describes analyses of data collected in the University of Alberta's 1984 Edmonton Area Study on variables concerning demographic characteristics of the sample, on AADAC-sponsored items about impaired driving, and on Solicitor General-sponsored items about the Check Stop Program.

The main objectives of the study were to focus on

(a) the group of drivers who also consumed alcohol and were therefore to some degree at risk of getting stopped by the police or causing an alcohol-related crash.

(b) the responses of this segment and the rest of the sample to the Check Stop items.

(c) the responses of these two segments to the items on intervening with impaired drivers.

For this analysis the overall sample (n=452) was divided into a segment of "at-risk" active drivers who also drank (n=325, 71.9%) and a segment of respondents who either didn't drink or were drinkers but not active drivers (n=119, 28.1%).

A simple index of risk was devised for the 325 drivers in the "at risk" segment based on a crosstabulation of frequency distributions of their responses to two items, one asking respondents to estimate their drinking capacity yet remaining "fit to drive" and another asking them to estimate their frequency of impaired driving during an "average month" over the last year. The following breakdown emerged:

- no risk 71.9%
- lower 10.4%
- moderate 10.1%
- higher 7.6%

For the subsequent analysis, the risk variable was crosstabulated with the demographic variables and it showed that the persons in the "higher" risk category were predominantly

- male
- between 18 and 35 years of age
- single
- high school trained
- employed
- holding construction or sales-related jobs.

The Check Stop Program appears to have a high profile among Edmonton adults, as suggested by the finding that over 90% of the respondents in the two segments reported having heard of it. Asked to assess the importance of the Check Stops relative to other police activities, only 50% of the "higher" risk drivers thought them more important compared to 84.9% of the "lower" risk drivers.

Consistent with other studies, individuals in the E.A.S. sample also indicated that impaired drivers face only a low probability of apprehension. The proportions of respondents across the sample who thought getting stopped by the police was **likely** ranged from a high of 40.5% in the segment consisting of people who were either not drinkers or not active drivers to a low of 20.8% in the category of "higher" risk drivers.

Drivers in the various categories of the risk variable appeared to generally believe that Check Stops exert a deterrent effect. This was especially true of the "lower" risk drivers, among whom over 80% said they believed that the Check Stops caused both **others** and **themselves** to drink less before driving. As for

the "higher" risk drivers, 70.8% and 66.7% gave the same assessments, respectively.

The analysis with the intervention items showed evidence of a "birds-of-a-feather" phenomenon in that the group most likely to report having been in a situation where an impaired friend or relative was about to drive were none other than the "higher" risk drivers, among whom 83.3% gave this response (compared to 39.9% of the "no" risk drivers). Similarly, the "higher" risk drivers were also the group most likely to intervene in some way. Thus, about one-half of the "higher" risk group reported trying some form of persuasion compared to about one-third of the "no" risk group.

Across the sample, respondents reported only rarely using physical restraint with an impaired friend or relative and never having asked the police to intervene.

Considered overall, the E.A.S. data confirm that, in Edmonton as elsewhere, both driving after drinking and impaired driving are normative and readily acknowledged behaviors. In addition, depending on the group used as the denominator, some

- 12% of the entire sample
- 15% of the drinkers in the sample
- 18% of the drinkers and active drivers

could be considered at <u>moderate to higher risk</u> of causing an alcohol-related misadventure when driving.

The data also illustrate two peculiarities of the impaired driving phenomenon. First, despite their apparent belief in the deterrent effect of the Check Stops, about one-quarter of the drinkers in the sample said they at least occasionally drive when they feel impaired. The drinking drivers also clearly recognize

that the chances of actually getting caught are very small. Second, people are generally aware of the dangers of impaired driving, are concerned when their friends do it, but at the same time studiously ignore or rationalize these dangers where their own drinking and driving is concerned.

1. INTRODUCTION

This paper presents the results of further analyses of the data related to alcohol use that were collected by the Population Laboratory, University of Alberta, in the 1984 Edmonton Area Study (E.A.S.).

AADAC contracted with the Lab to have 11 items on drinking and driving, and countermeasures against impaired driving included in this survey of Edmonton adults (18 years and older). A list of 560 addresses was generated from which 452 residents granted interviews, yielding a response rate of 81%.

During the summer of 1984, a preliminary analysis of the AADAC data was completed and described in an initial report of "Highlights of Results for the AADAC Items in 1984 Edmonton Area Study." A copy of this report is included in Appendix A.

Subsequently, the Policy and Planning Unit obtained a copy of the data tape from the Population Lab which contained information on the demographics of the sample and on their responses to a set of items from the Dep't of the Solicitor General on Check Stop and other traffic enforcement questions (which the S.G. agreed to share in return for access to the AADAC data). Major parts of this information were included in the analyses conducted for the present report.

1.1 Objectives

It was not our intent with this study to investigate these data exhaustively, but to focus in greater depth on

(a) the group of drivers who also consumed alcohol and were therefore to some degree "at risk" of being stopped by the police or causing an alcohol-related crash.

(b) the responses of this segment and the rest of the sample to the Check Stop items.

(c) the responses of these two segments to the items on intervening with impaired drivers.

2. DEMOGRAPHIC PROFILE

The "Highlights" report (Appendix A) includes a demographic profile indicating that the E.A.S. sample

(a) contained about equal proportions of males (50.9%) and females (49.1%).

(b) had an average age of 38.5 years, but with a concentration of people in the 25-34 years-of-age category (35.8%).

(c) was comprised mainly of people who were either married (51.1%) or single (23.9%).

(d) had an average of 13 years of schooling, with 38.5% reporting high school, 23.2% indicating technical/trade, and 27.6% having at least some university.

(e) had a majority of persons who were employed (64.9%).

(f) reported a median personal income in the $16-$18 thousand per year category.

(g) lived an average of 18 years in Edmonton.

Frequency distributions for the sample on several of the demographic variables appear in Table A, Appendix B.

3. THE AT-RISK DRINKING DRIVERS

3.1 Developing Their Risk Profile

One of the initial findings with the AADAC items was that 83% of the overall sample (452) of respondents described themselves as drinkers (i.e. had at least one drink during the last year).

However, the segment of at-risk drinking drivers in the sample was of considerably smaller size. It specifically excluded respondents who

- didn't drink
- were drinkers but didn't own or otherwise drive a motor vehicle.

This "excluded" segment numbered 119 respondents (26.3% of the entire sample) which, when expanded to include 8 others who had indicated "don't know" and "no response, "totalled 127 individuals (28.1% of the entire sample).

This left the segment of 325 at-risk drinking drivers. The task with this group involved developing a simple risk profile that would differentiate between those drivers who stood relatively little or no chance of getting charged with impaired driving or causing an alcohol-related crash and those drivers who, because they more frequently drove after drinking heavily, were at much greater risk of experiencing such misadventures.

A continuum of risk was created on the basis of this group's responses to the questions:

> "How many drinks do you think you can have in 3 hours and still be fit to drive?"
>
> "In an average month over the last year, how often have you felt that you had consumed enough alcohol to be legally impaired when you were driving a motor vehicle?"

Tables B and C, in Appendix B, show the frequency distributions of their responses to these questions.

In terms of their capacity to drink and remain under the legal BAC limit, it is noteworthy that over two-thirds (227, 70%) of this segment gave an estimate in the accurate/safe range of 0-3 drinks. On the other hand, almost one-third significantly overestimated how much they could drink, with 29 individuals (9%) judging their capacity to be from 6-12 drinks, a quantity well beyond the safety limits.

Regarding the second question, nearly three-fourths (72.5%) of this segment indicated that they typically never drove a motor vehicle after they had consumed enough alcohol to feel impaired. However, 89 individuals (28%) disclosed that they had driven when so affected, with 48 (15%) of them reporting the occurrence of such drinking-driving behaviors at a rate of two or more times during an average month. With 25 of the respondents (8%), this occurred at the rather routine frequency of once a week or more (i.e., 4-28 times per month)[1].

[1] These 89 individuals who disclosed that they had driven after drinking at least once in an average month over the last year accounted for 24% of the drinkers in the sample. Oddly, this result is about 10 percentage points higher than the corresponding findings of a 1983 Transport Canada study with a national sample of 2,000 randomly selected active licensed drivers of legal drinking age. In this sample, 14% of the drinkers nationally, and 15% of them in Alberta, said they had driven during the past month when they thought they may have been legally impaired. The reasons for this discrepancy are unknown, but the different wordings used and the slightly different time referents of the two questions are probable causes.

An index of risk, shown in Table 1, was then developed based on a crosstabulation of the drinking-drivers' responses to the two questions.

TABLE 1

Risk of Alcohol-Related Misadventure Among E.A.S. Sample

Category	n	% of drivers who also drink	% of entire sample
No Risk	228	71.9	50.4
Lower	33	10.4	7.3
Moderate	32	10.1	7.1
Higher	24	7.6	5.3
	(317)	(100%)	
n/a, missing	135[a]		29.9
	((452))		((100%))

[a] includes: don't drink, drink but don't own or drive a vehicle (119), and don't know, no response (16).

The categories in Table 1 were devised to indicate

(a) virtually no risk for drivers who said they never drove when impaired or did so at a frequency of less than once/month.

(b) lower risk for drivers who estimated their drinking capacity to be 1-3 drinks and impaired driving frequency at 1-4 times/month.

(c) moderate risk for drivers who estimated their drinking capacity to be 3 drinks and impaired driving frequency at 5-6 times/month PLUS those who estimated their capacity to be 4-5 drinks and their driving frequency at 1-6 times/month.

(d) higher risk for drivers who estimated their drinking capacity to be 6-12 drinks and impaired driving frequency at 1-28 times/month.

It should be understood that the cut points for these categories were not derived from the risk estimates presented in the addictions literature but were based solely on the data at hand. The analysis revealed a moderate correlation between responses to the two questions above ($r=.49$, $p=.0001$). In addition, the rationale for the category of "higher" risk rests on the plausible notion that persons who overestimate the amount they can drink, by double or more, and still believe they remain fit to drive, do indeed run a substantial risk of having an alcohol-and-driving misadventure, especially on those occasions when they drive after drinking enough to sense their impairment and this happens at a frequency of once a week or more!

After this index was developed, the analysis took the direction of looking for systematic differences among the categories of drinking drivers in terms of their demographic

characteristics, their responses to the Check Stop items, and their views on intervening with impaired drivers. It is to these matters that we now turn.

3.2 Demographic Differences

Crosstabulation procedures were performed with the main demographic variables included in the E.A.S. study and the composite "risk profile" variable representing the 325 drivers who also drank. Of the seven demographic variables considered, statistically significant differences ($p <= .05$) were detected for all but one of them (i.e., income). Highlights of the results for the remaining six variables are presented below and, except for the occupations variable, their corresponding tables are displayed in Table D, Appendix B.

(i) Sex

Females predominate in the "lower" risk category (54.6%) while males predominate in the "moderate" (81.3%) and "higher" (87.5%) risk categories.

(ii) Age

In general, the "no" risk category contains larger proportions of older respondents (i.e., in the 35-44, 45-59, and 60+ years-of-age groups) while 81.2% and 83.3% of respondents located in the "moderate" and "higher" risk categories, respectively, are in the 18-34 years-of-age groups.

(iii) Marital Status

Regarding marital status, married persons form the majority (58.3%) in the "no" risk category and dominate the "lower" risk category (45.6%). However, single persons comprise the majority in both the "moderate" (50%) and "higher" (58.3%) risk categories.

(iv) Educational Attainment

The pattern that emerges is that high school training characterizes respondents in the "moderate" (50%) and "higher" (66.7%) categories while substantially larger percentages of respondents in the "lower" and "no" risk categories indicated that they had university training (i.e., 42.4% and 33.3%, respectively).

(v) Employment Status

Within risk categories, somewhat larger proportions of employed respondents cluster in the "moderate" (71.9%) and "higher" (66.7%) risk categories than in the "no" (57%) risk category. On the other hand, there are noticeable concentrations of retired persons and houseworkers in the latter category.

(vii) Occupation

Consistent with the findings on the education variable, there are groupings of respondents from the "no" risk category in the managerial/professional occupations. In the "high" risk group, however, the major concentrations appear in the occupations related to construction (25%), mining-petroleum (13%), and sales (13%).

Condensing the above information even further, one could characterize the persons comprising the "higher" risk category as

-- male
- between 18 and 35 years of age
- single
- high school trained
- employed
- holding jobs in construction or sales.

3.3 Responses to Check Stop Items

(i) Awareness of Check Stop

Respondents were asked a series of questions on the Solicitor General's Check Stop program. For the current analysis, crosstabulations were run with the Check Stop items and the risk-level variable. Following sections outline the pertinent findings in which statistically significant differences were detected.

Results for the item: "Have you ever heard of the 'Check Stop' program?" are shown in Table E, Appendix B. (NOTE: this table includes information for drivers at various risk levels PLUS information for the other segment of respondents who were either not drinkers or not drivers.) Findings of major interest are:

(a) respondents throughout the sample were highly aware of the Check Stop program.

(b) recognition was high among all categories of drivers grouped under the risk-level variable (96.9%-100%).

(c) overall, the highest recognition was among drivers at "lower" risk (100%) and "higher" risk (100%) while the lowest recognition was among those respondents excluded from the risk-level segment (92.6%).

Results for the item asking respondents to rate the importance of operating Check Stops relative to traffic enforcement and other police activities are also shown in Table E, Appendix B. Findings of major interest are:

(a) 50% or more of respondents in the various categories devised for this analysis regarded the Check Stop Program as a "more important" police activity than traffic enforcement.

(b) as one might expect, the **largest** proportion of drivers who rated Check Stops as "less important" occurred in the "higher" risk category (33.3%). However, the **largest** proportion of individuals who gave a "more important" rating to Check Stops occurred among the excluded segment who were either not drinkers or not drivers (72.5%).

(c) drivers at the "moderate" risk level had the largest cluster of "neutral" respondents (21.9%).

Results for the item "... how likely is it that an impaired driver will be stopped by the police?" are also displayed in Table E, Appendix B. Findings of major interest are:

(a) the majority of respondents within the two segments thought that the police stopping an impaired driver was either "unlikely" or that such an outcome was equally likely or unlikely to happen (i.e., the "neutral" category).

(b) across drivers in the various categories of the risk-level variable, the proportion of individuals who thought getting stopped was a "likely" event ranged from about 20% to 27%.

(c) the "higher" risk category contained the **smallest** proportion of individuals who thought getting stopped was a "likely" event (20.8%). Across the entire sample, this subset also had the largest grouping of cases in the "neutral" category (33.3%)..

(d) on the other hand, nearly half (40.5%) of the segment in the sample who were either not drinkers or not drivers thought that impaired drivers were "likely" to get stopped.

(ii) Check Stop's Deterrent Effect

Respondents were asked to consider Check Stop's efficacy at causing others and themselves, personally, "... to drink less

before driving." Table 2, below, presents the results of the analysis of their responses.

TABLE 2

E.A.S. Sample's Assessment of Check Stop's Deterrent Effect

Check Stop Item	Not Drinker or Not Driver[a]		RISK LEVEL							
			No Risk		Lower		Moderate		Higher	
	n	%	n	%	n	%	n	%	n	%
Others Drink/ Drive Less[b]:										
Yes	55	41.0	172	75.4	28	87.5	25	78.1	17	70.8
No	69	51.5	52	22.8	4	12.5	6	18.8	7	29.2
Unaware of C.S.	10	7.5	4	1.8	0	0.0	1	3.1	0	0.0
	(134)	(100%)	(228)	(100%)	(32)	(100%)	(32)	(100%)	(24)	(100%)
I Drink/ Drive Less[c]:										
Yes	5	3.7	138	60.5	26	81.3	26	81.3	16	66.7
No	4	3.0	49	21.5	5	15.6	5	15.6	8	33.3
Don't dr/dr	126	93.3	41	18.0	1	3.1	3	9.4	0	0.0
	(135)	(100%)	(228)	(100%)	(32)	(100%)	(32)	(100%)	(24)	(100%)

[a] includes: don't drink, drink but don't own or drive a vehicle, don't know, no response.

[b] chi-square=57.7, df=8, p=.0001

[c] chi-square=262, df=8, p=.0001

First, regarding Check Stop's ability to induce **others** to drink less, the top section of Table 2 shows that from 70.8% (higher risk) to 87.5% (lower risk) of the individuals in the various categories of drivers agreed that Check Stop has such influence. Oddly, 51.5% of the persons in the segment consisting of those who were either not drinkers or not drivers believed that Check Stop **does not** exert a deterrent effect.

Second, in terms of their **personal** drinking-driving behavior, the bottom section of Table 2 shows that from 60.5% (no risk) to 81.3% (lower and moderate risk) of the individuals in the various categories of drivers said that Check Stop made them drink less before driving. Two-thirds (66.7%) of the "high" risk drivers gave this assessment. (Unfortunately, the accuracy of this section is reduced somewhat by a small number of misclassified cases in the "don't dr/dr" row: lower risk (1) and moderate risk (3).)

3.4 Intervening With Impaired Friends/Relatives

(i) Extent of Occurrence

Regarding the sample's willingness to take action with an impaired friend or family member who was about to drive, the vast majority (97%) of respondents said they would get involved (see "Highlights" report, Appendix A). But the crosstabulation analyses conducted for the present report did not reveal statistically significant differences among the segments of respondents concerning the kinds of interventions that they were prepared to take.

However, reliable differences were detected in their responses to the questions of whether they had **actually been** in a situation with an impaired friend/relative over the last year and

of whether they had **actively intervened.** These results are displayed in Table F, Appendix B.

Findings of major interest are:

(a) there appears to be a positive, linear relationship between a segment's drinking/driving status and the proportion of individuals reporting that they had actually been in such a situation with an impaired friend/relative. The figures range from a low of 21.8% among persons who were either not a drinker or not a driver to a high of 83.3% for the "higher" risk drivers.

(b) a similar pattern describes the extent to which respondents reported actually taking some sort of action to deter their impaired friend/relative from driving. The figures range from a low of 20.3% for those who were either not drinkers or not drivers to 75% for the "higher" risk drivers. It is interesting that between 60.6% and 75% of the drivers at risk of causing an alcohol-related misadventure indicated that they took some kind of concrete preventive action with their impaired friend/relatives.

(ii) Types of Interventions

Statistically significant differences were also detected among the segments in terms of the kinds of actions taken in these situations. Table 3 shows the percentage of respondents within segments who reported having taken various preventive actions.

TABLE 3

Percentage of Respondents Indicating Various Interventions
With Impaired Friends/Relatives About to Drive

Intervention	Not Drinker or Not Driver[a] (n=133)	RISK LEVEL			
		No Risk (n=228)	Lower (n=33)	Moderate (n=32)	Higher (n=24)
	%	%	%	%	%
Persuade Not to Drive	11.3	24.6	33.3	46.9	50.0
Suggested Self Drive Instead	12.0	27.2	39.4	46.9	54.2
Suggested Stay Over	10.5	17.5	39.4	46.9	45.8
Tried to Take Keys	3.0	10.0	15.2	21.9	16.7
Tried Physical Restraint	0.0	0.4	0.0	3.1	12.5
Called Police	0.0	0.0	0.0	0.0	0.0

[a]includes: don't drink, drink but don't own or drive a vehicle, don't know, no response.

Findings of major interest are:

(a) again, an overall pattern emerges in which the proportion of respondents within the sample who reported taking a preventive action increases as their risk level increases.

(b) there was a clear preference for trying to persuade the person not to drive, for offering to drive instead, and for suggesting that the person stay over.

(c) there was a singular lack of interest in trying to take the person's keys away or to physically restrain him or her in some fashion. And nobody called the cops.

For the final part of the analysis, the various segments of the sample were compared respecting their opinions of what the first-and-second-most-effective ways are of preventing impaired driving in Alberta. However, no systematic differences were detected in their responses to these items.

4. DISCUSSION

The findings of the present report help to clarify and confirm, with a local sample, some of what is already known about the impaired driving phenomenon.

1. According to the self-reports on which the risk-level variable was based, the group of drivers considered at moderate-to-higher risk of causing an alcohol-related misadventure when driving represented

- 12% of the entire sample
- 15% of the drinkers in the sample
- 18% of the drinkers and active drivers.

2. Regarding the demographics of the "higher" risk group, individuals with the following characteristics were predominant: younger, single males with high school training who held construction and sales-related jobs. This suggests that these persons were not particularly "deviant" or socially marginal; they came from somewhere in the middle of the general population.

3. There appears to be a very high degree of public awareness of and support for the Check Stop Program. Across categories in the two segments of the sample, 50% or more of the drivers under the risk level variable were aware of Check Stops, assigned them greater importance than traffic enforcement, and indicated the belief that the Check Stops do influence others and themselves to drink less before driving.

It is heartening to note the apparent impact of the Check Stop Program on the awareness of "higher" risk drivers, among whom 100% had heard of Check Stop, 70.8% thought the Program influenced others to drink less before driving, and 66.7% indicated that it had such a deterrent effect on their own drinking-driving behavior.

4. However, the data provide some insight into why the "higher" risk drivers would persist in often driving when impaired despite the apparent inhibiting effects of the Check Stops. They recognized that chances are they wouldn't get caught; indeed, only about one-fifth of them considered such an outcome "likely."

5. The data also show that many people find themselves in situations where a friend or relative is intoxicated and about to drive, and that such events are especially common among persons who themselves are apt to drive when impaired. Thus, 83.3% of the "higher" risk drivers reported having experienced such situations.

It is also heartening to note that three-fourths of the "higher" risk drivers said they took some preventive action with their impaired friend or relative. This suggests that these individuals did have some appreciation of the dangers associated with impaired driving.

6. Yet, by their own admission, this category of drivers frequently carried out such potentially dangerous behavior themselves! This demonstrates an important gap in the way that many people think about impaired driving (which is probably related to the behavior noted in point #4 above): they understand the illegality of driving when intoxicated; they are aware of the Check Stop Program, understand and support its aims; they recognize the dangers of arrest and possible car crash if a friend or relative drives when impaired; they are concerned and, within the limits of socially acceptable practise, they try to persuade this person not to drive or they offer to drive the vehicle themselves. But for themselves, the dangers just don't seem that real and it becomes easy to ignore or rationalize them when these individuals have a few too many drinks then set off in their cars.

APPENDIX A

"Highlights" Report

HIGHLIGHTS OF RESULTS

FOR AADAC ITEMS

IN 1984 EDMONTON AREA STUDY

Prepared by

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JULY, 1984

1. INTRODUCTION

a. The Edmonton Area Study

AADAC contracted with the Population Lab, University of Alberta, to have 11 items on alcohol use and drinking and driving included in the 1984 Edmonton Area Study (E.A.S).

The E.A.S., which uses structured questions and face-to-face interviews, is an annual survey with a randomly selected sample of Edmonton residents 18 years of age and older on various topical issues and social questions of ongoing interest.

The sample consisted of 560 addresses. Out of that number 452 residents granted interviews, resulting in a response rate of 81%.

b. Demographic Profile

The final sample of 452 respondents contained about equal proportions of males (51%) and females (49%). They had an average age of 38.5 years, were mainly married (51%) or single (24%), and had completed high school (21%) or attained some post-secondary training (including technical-trades) up to a bachelor's degree (46%).

About two-thirds (65%) of respondents said they worked either full-time or part-time outside of the home. The most frequently cited occupations were in the clerical (20%) and service (13%) areas. Eight per cent were unemployed. The sample's median household income was in the $30,000-$31,999 category.

2. ALCOHOL-RELATED ITEMS

a. Alcohol Use

A majority of respondents (83%) indicated that they did drink alcoholic beverages.

b. Drinking and Driving

The sample contained a large subgroup comprised of respondents who were both drinkers and active drivers (n=325, 72%) of whom 195 persons (43% of the entire sample) said they had driven after drinking in the last year. Of that subgroup of drinkers and active drivers (n=325), 70% of them accurately estimated that they could consume from 0 to 3 drinks in 3 hours and still be fit to drive.[1] The remaining 30% provided an estimate falling in the range of 4-12 drinks.

[1]Calculations indicate that, after 3 hours, the blood alcohol concentrations (BAC) of a 125 lb. female and 150 lb. male should be below the legal limit of 80 mg%.

When asked to estimate how often in an average month over the last year they had at least one drink then, within an hour, drove a motor vehicle, this subgroup of 325 individuals responded as follows:

39%-never
19%-once/month or less
24%-2-4 times/month
18%-5 or more times/month

On a follow-up question these drinking drivers estimated the frequency with which they felt they had consumed enough alcohol to be legally impaired then drove a motor vehicle. Their responses were:

65%-never
6%-less once/month
13%-once/month
10%-2-4 times/month
5%-5 or more times/month

c. Dealing With Impaired Drivers

Half of the sample (49%) felt that it was to some degree unlikely that an impaired driver would be stopped by the police. About one-fifth (20%) indicated that either outcome was equally likely and 28% believed that the impaired driver would likely get caught.

Almost everyone (97%) said that he or she would intervene if someone in their family were about to drive when impaired. As for actions these interventionists were willing to take, the following pattern emerged:

78% - try to persuade person not to drive
88% - offer to drive or suggest taking a taxi
81% - suggest they stay overnight or go to hotel
49% - try to take keys away
20% - physically restrain the person
10% - call the police

Respondents were asked if, over the last year, they had been in a situation where a friend or someone in the family was about to drive while impaired. Over one-third (n=184, 41%) answered that they had such an experience.

Of this group, 94% (n=172) said they took action with this impaired friend or family member.

With what actions did they respond? The following pattern emerged:

63% - tried to persuade person not to drive
69% - offered to drive or suggested taking a taxi
54% - suggested they stay overnight or go to a hotel
24% - tried to take keys away
3% - physically restrained the person
0% - called the police

Respondents were asked to identify a measure that they thought would be the single-most effective way to prevent impaired driving in Alberta. The four most frequently cited measures were:

44% - increase penalties
18% - increase enforcement
14% - conduct ad campaigns to change attitudes
9% - teach about alcohol in schools

The same categories, though in different order, were also preferred as the second-most effective way to prevent impaired driving in Alberta:

28% - increase enforcement
16% - teach about alcohol in the schools
14% - increase penalties
11% - conduct ad campaign to change attitudes

Regarding the price of alcohol in Alberta, 47% felt it is priced about right, 9% regarded the price as too low, and 33% said it was priced too high.

3. DISCUSSION

The E.A.S. is a carefully executed survey with a representative sample and the information that it provides confirms and extends our knowledge of local public opinion on drinking and driving.

The study's main limitation is geographic: it represents the views of Edmonton resident only, and not of all Albertans.

The data reflect a distinct middle-class view. The sample, after all, was substantially made up of people between 25 and 44 years of age who maintained stable living patterns: single or married, working, moderate income.

Over 80% of the sample consumed alcohol and 72% (325 respondents) were both drinkers and active drivers. Many of this subgroup accurately estimated the number of drinks they could have in three hours and stay under the legal limit; 70% of them gave an answer of three or fewer drinks.

According to their self-reports, two-thirds of these drivers never drove after having imbibed enough to feel impaired. However, about one-quarter of them (23%) said they did this from 1-4 times in an average month over the last year. Another 5% said they did this 5 or more times per month.

These findings emphasize that drinking to the point of probable legal impairment, then driving, was a behavior that many drivers in this subgroup did knowingly with considerable frequency.

In terms of intervening with intoxicated people who are about to get behind the wheel, we would expect this sample to be fairly responsive. Indeed, over 90% said they would get involved, indicating most often that they would offer to drive or suggest taking a taxi (88%) and least often that they would call the police (10%).

But less than half of the sample disclosed that they had actually been in a situation where someone close to them was about to drive when impaired. Under these circumstances, there was a drop of anywhere from 10-27 percentage points in interventions.

It is noteworthy that the more socially acceptable interventions of trying to persuade the person or making a helpful offer or suggestion were cited by more than half of the respondents while only rarely did they mention the physical and more stringent tactics.

The E.A.S. results also confirm that in Edmonton, as in other jurisdictions, there is considerable support for taking a harder line with impaired drivers both in terms of penalties and law enforcement. Promotional and educational activities designed to encourage public attitudes against drinking and driving are also favored.

APPENDIX B

Tables for Selected Analyses

TABLE A

Demographic Characteristics of E.A.S. Sample

Variable	n	%
Sex:		
Male	230	50.9
Female	222	49.1
	(452)	(100%)
Age:		
18-24	77	17.0
25-34	162	35.8
35-44	72	15.9
45-59	84	18.6
60+	56	12.4
	(451)	(100%)
Marital Status:		
Single	108	23.9
Married	231	51.1
Common-Law	23	5.1
Divorced	45	10.0
Separated	19	4.2
Widowed	26	5.8
	(452)	(100%)
Education Level:		
Elementary	10	2.2
Junior High	38	8.5
High School	173	38.5
Technical Trade	104	23.2
Some University	50	11.1
University Degree	74	16.5
	(449)	(100%)
Employment Status:		
Employed (Full & Part time)	292	64.9
Unemployed	38	8.4
Retired	39	8.7
In School	27	6.0
Keeping House	54	12.0
	(450)	(100%)

TABLE B

Estimated Drinking Capacity and Still Fit to Drive

# Drinks	n	% of drivers who also drink	% of entire sample
0	16	4.9	3.6
1	45	13.9	10.0
2	85	26.2	18.9
3	81	24.9	18.0
4	42	12.9	9.4
5	27	8.3	6.0
6	16	4.9	3.6
7	4	1.2	0.9
8	4	1.2	0.9
10	3	0.9	0.7
12	2	0.6	0.5
	(325)	(100%)	
n/a, missing[a]	127	—	28.1
	((452))	—	((100%))

[a] includes: don't drink, drink but don't own or drive a vehicle (119), don't know (5), no response (3).

TABLE C

Self-Reported Monthly Frequency of Impaired Driving

Times/month	n	% of drivers who also drink	% of entire sample
0-<once/mo[a]	234	72.5	51.8
1	41	12.7	9.2
2	14	4.3	3.1
3	9	2.8	2.0
4	10	3.1	2.2
5	5	1.6	1.1
6	1	0.3	0.2
8	2	0.6	0.4
10	3	0.9	0.7
12	1	0.3	0.2
20	2	0.6	0.5
28	1	0.3	0.2
	(323)	(100%)	
n/a, missing[b]	129	—	28.5
	((452))		((100%))

[a] This group includes 21 respondents who said they drove impaired at a frequency of less than once/month.

[b] includes: don't drink, drink but don't own or drive a vehicle (119), don't know (4), no response (6).

TABLE D

Crosstabulations of Alcohol-Related Risk Level and Selected Demographic Variables

Variable	Risk Level							
	No Risk		Lower		Moderate		Higher	
	n	%	n	%	n	%	n	%
Sex[a]:								
Male	115	50.4	15	45.5	26	81.3	21	87.5
Female	113	49.6	18	54.6	6	18.8	3	12.5
	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)
Age[b]:								
18-24 years	35	15.4	9	27.3	9	28.1	12	50.0
25-34	81	35.5	18	54.6	17	53.1	8	33.3
35-44	42	18.4	3	9.1	4	12.5	1	4.2
45-59	48	21.1	2	6.1	2	6.3	3	12.5
60+	22	9.7	1	3.0	0	0.0	0	0.0
	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)
Marital Status[c]:								
Single	46	20.2	11	33.3	16	50.0	14	58.3
Married	133	58.3	15	45.6	8	25.0	2	8.3
Common-Law	11	4.8	2	6.1	2	6.3	6	25.0
Divorced	21	9.2	3	9.1	3	9.4	1	4.2
Separated	8	3.5	2	6.1	2	6.3	1	4.2
Widowed	9	4.0	0	0.0	1	3.1	0	0.0
	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)
Schooling[d]:								
Elementary	1	0.4	0	0.0	0	0.0	0	0.0
High School	97	42.5	12	36.4	16	50.0	16	66.7
Technical	54	23.7	7	21.2	8	25.0	8	33.3
University	76	33.3	14	42.4	8	25.0	0	0.0
	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)
Employment Status[e]:								
Full-Time	130	57.0	22	66.7	23	71.9	16	66.7
Part-Time	30	13.2	5	15.2	0	0.0	2	8.3
Unemployed	17	7.5	2	6.1	4	12.5	4	16.7
Retired	17	7.5	1	3.0	1	3.1	0	0.0
In School	12	5.3	2	6.1	3	9.4	2	8.3
Houseworker	22	9.7	1	3.0	1	3.1	0	0.0
	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)

[a] chi-square=32.4, df=4, p=.0001
[b] chi-square=73.7, df=20, p=.0001
[c] chi-square=82.0, df=20, p=.0001
[d] chi-square=46.2, df=16, p=.0001
[e] chi-square=51.1, df=20, p=.0002

TABLE E

E.A.S. Sample's Responses to Check Stop Items

Check Stop Item	Not Drinker or Driver[a]		Risk Level							
			No Risk		Lower		Moderate		Higher	
	n	%	n	%	n	%	n	%	n	%
Heard of Checkstop[b]										
Yes	125	92.6	224	98.3	32	100.0	31	96.9	24	100.0
No	10	7.4	4	1.8	0	0.0	1	3.1	0	0.0
	(135)	(100%)	(228)	(100%)	(32)	(100%)	(32)	(100%)	(24)	(100%)
Importance of Check Stop[c]										
Less important	24	18.5	31	13.6	5	15.2	6	18.8	8	33.3
neutral	12	9.2	42	18.4	0	0.0	7	21.9	4	16.7
more important	94	72.3	155	68.0	28	84.9	19	59.4	12	50.0
	(130)	(100%)	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)
Chances of Getting Stopped[d]										
Unlikely	45	35.7	130	57.3	16	48.5	19	59.4	11	45.8
neutral	30	23.8	42	18.5	8	24.2	5	15.6	8	33.3
likely	51	40.5	55	24.2	9	27.3	8	25.0	5	20.8
	(120)	(100%)	(227)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)

[a] includes: don't drink, drink but don't own or drive a vehicle, don't know, no response

[b] chi-square=10.7, df=4, p=.03

[c] chi-square=19.8, df=8, p=.01

[d] chi-square=20.0, df=8, p=.01

TABLE F

Respondents Reporting and Intervening With Impaired Friends/Relatives About to Drive

ITEM	Not Drinker or Not Driver[a]		Risk Level							
			No Risk		Lower		Moderate		Higher	
	n	%	n	%	n	%	n	%	n	%
Had Imp'd Fr/Rel About to drive[b]										
Yes	29	21.8	91	39.9	21	63.6	23	71.9	20	83.3
No	104	78.2	137	60.1	12	36.4	9	28.1	4	16.7
	(133)	(100%)	(228)	(100%)	(33)	(100)	(32)	(100%)	(24)	(100%)
Intervened with Imp'd Fr/Rel[c]										
Yes	27	20.3	86	37.7	20	60.6	21	65.6	18	75.0
No	2	1.5	5	2.2	1	3.0	2	6.3	2	8.3
Had no such Fr/Rel	104	78.2	137	60.1	12	36.4	9	28.1	4	16.7
	(133)	(100%)	(228)	(100%)	(33)	(100%)	(32)	(100%)	(24)	(100%)

[a] includes: don't drink, drink but don't own or drive a vehicl, don't know, no response

[b] chi-square=57.8, df=4, p=.0001

[c] chi-square=59.2, df=8, p=.0001